

REMARKS

Claims 1-11 are pending. Claims 6 and 7 have been allowed.
Reconsideration and allowance based on the above amendments and following remarks are respectfully requested.

Allowable Subject Matter

Applicants appreciate the indication of claims 6 and 7 as containing allowable subject matter and would be allowed if amended to incorporate their respective independent claims from which they depend.

Prior Art Rejection

Claims 1-5, 8-11 stand rejected under 35 U.S.C. §103(a) in view of Peyla et al. (US 6,539,063), Huang et al. (EP 0 896 457) and McCorkle et al. (US 6,505,032). This rejection is respectfully traversed.

The present invention is concerned with generating a synchronisation pulse representing a symbol boundary in a signal comprising useful signal periods separated by guard spaces. In accomplishing this, the relationship between complex samples is examined by separately considering the relationship between amplitudes using a first signal and the relationship between phases using a second signal. The function of separately considering the relationship between the amplitudes using the first signal and the relationship between the phases using the second signal also allows different filtering to be applied to the phase and amplitude signals.

Applicants note that claim 1 recites, *inter alia*, (1) a first signal is derived dependent upon the relationship between the amplitudes of the pair of samples; (2) a second signal is derived dependent upon the relationship between the phases of the pair of samples; (3) the first and

second signals are combined giving a resultant signal; and (4) a synchronisation pulse is generated in response to the resultant signal changing in a predetermined manner. Applicants respectfully submit that the combination of Peyla, Huang and McCorkle fail to teach the above-noted features.

The Examiner asserts that Peyla teaches a first signal as claimed with respect to element (1) above and Huang teaches a second signal with respect to element (2) noted above. The Examiner asserts that McCorkle provides the teaching which make is obvious to combine Peyla and Huang to achieve Applicants claimed combining of the first and second signals as noted with element (3) and generation of the synchronization pulse as noted with element (4) above. Applicants strongly disagree.

Nowhere in Peyla and Huang is it taught or suggested to combine the teachings therein in a manner to achieve Applicants claimed features. This is recognized by the Examiner and thus the Examiner has provided McCorkle to allegedly remedy the deficiencies of Peyla and Huang. McCorkle, however, teaches a very different system from Peyla and Huang and one of ordinary skill in the art would not look to McCorkle to achieve a combination of Peyla and Huang's teachings in the manner claimed by Applicants.

McCorkle is concerned with a carrierless ultra-wideband wireless system which uses bi-phase modulated and quadrature phase modulated signals, etc. or wavelet pulses. Synchronisation is achieved in a very different manner from the claimed invention. Within McCorkle's teaching, there is no suggestion or discussion of having guard spaces which are important recited features of the claimed invention and affect the manner in which a first and second signal are derived. Thus, there is no motivation or suggestion for one of skill in the art to suppose that the teachings of McCorkle would be of any benefit to a system

which utilizes guard spaces to achieve synchronisation as in Applicants claimed invention. Therefore, one of ordinary skill in the art would not be motivated to combine Peyla and Huang's teachings in view of McCorkle's teachings.

Further, even if one of skill in the art were to consider McCorkle teachings relevant, which Applicant contend they would not, they would not arrive at the claimed invention. McCorkle uses multiple correlators to search for and synchronize two transmitted pulses. See Col. 9, lines 39-44, Col. 9, line 64 – Col. 10, line 39. In other words, several different attempts to identify synchronisation are performed in parallel. There is no teaching or suggestion of first and second signals being combined to give a resultant signal and a synchronisation pulse being generated in response to the resultant signal changing in a pre-determined manner as claimed. Stated otherwise, there is no teaching or suggestion of combining a signal dependent of amplitude difference of a pair of samples with a signal dependent on phase difference of a pair of samples and then generating a synchronisation pulse by processing the resultant signal. The outputs of the correlators in McCorkle are processed separately, not combined and then processed. Thus, McCorkle can't teach features on which it is relied to teach.

It is important to note that the combining of two separate signals is not enough to provide support for combining the teachings of Peyla and Huang to achieve Applicants claimed invention. There must be some motivation or teaching, which the Examiner has admitted is absent in Peyla and Huang and thus this must be found in McCorkle, of combining a first and second signal where the first signal is derived dependent upon the relationship between the amplitude of a pair of samples and the second signal is derived dependent upon the relationship between the phase of a pair of samples. Simply stated, there is no such teaching or suggestion within McCorkle.

Regarding independent claims 10 and 11, these two claims recite features similar to claim 1 and therefore allowable for the same reasons as claim 1. Likewise, claims 2, 5, 8 and 9 are distinguished from the cited art for at least the reasons above with respect to their dependence claim 1.

For at least the above reasons, it is submitted that the combination of Peyla, Huang and McCorkle fail to teach each and every feature of independent claims 1, 10 and 11 as required. Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

Conclusion

For at least the above reasons Applicants respectfully submit Claims 1-11 are distinguishable over the cited art. Favorable consideration and prompt allowance are earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad J. Billings Reg. No. 48,917 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/824,395
Amendment dated April 14, 2008 (Monday)
Reply to Office Action of December 12, 2007


Docket No.: 1906-0133PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.147; particularly, extension of time fees.

Dated: April 14, 2008 (Monday)

Respectfully submitted,

By


Chad J. Billings

Registration No.: 48,917

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road, Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant